

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
21 May 2004 (21.05.2004)

PCT

(10) International Publication Number
WO 2004/041524 A2

(51) International Patent Classification⁷:

B31B

(21) International Application Number:

PCT/US2003/034318

(22) International Filing Date: 30 October 2003 (30.10.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/422,571 31 October 2002 (31.10.2002) US

(71) Applicant (for all designated States except US): STORA
ENSO NORTH AMERICA CORPORATION [US/US];
510 High Street, Wisconsin Rapids, WI 54495 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): IYENGAR, Gopal
[IN/US]; 2550 Brahms Way, Wisconsin Rapids, WI 54495
(US). DICKS, Jeffrey, G. [US/US]; 4137 Autumn Trail,
Nekoosa, WI 54457 (US). ELLIS, Mark, D. [US/US];
6931 Lisa Lane, Wisconsin Rapids, WI 54495 (US). GLO-
DOSKI, Gary, G. [US/US]; 617 Bukolt Street, Stevens
Point, WI-54481 (US).

(74) Agent: JUETTNER, Paul, G.; Greer, Burns & Crain,
Ltd., 300 South Wacker Drive., Suite 2500, Chicago, IL
60606 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG,
SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN,
YU, ZA, ZM, ZW.

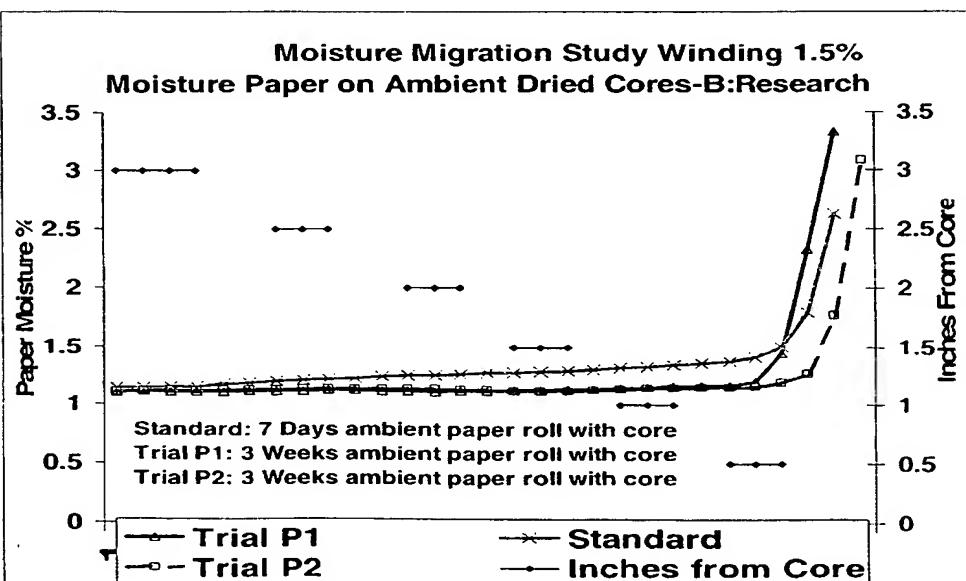
(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a
patent (Rule 4.17(ii)) for all designations

[Continued on next page]

(54) Title: HIGH STRENGTH DIMENSIONALLY STABLE CORE



(57) Abstract: A paperboard having improved strength and water resistance comprises a standard paperboard furnish modified by adding 5-60 lbs/ton alum, 3-40 lbs/ton of liquid size, and 16-50 lbs/ton modified cationic starch. A more preferred formulation has a paperboard furnish, 4-40 lbs of alum per ton of furnish, 3-12 lbs of liquid size per ton of furnish, and 30-40 lbs of cationic starch per ton of furnish. Other additives such as a dry strength agent and microparticle silica may be added. Paperboard cores spirally wound from the paperboard of the invention exhibit shorter cure time, higher strength, improved dimensional stability, and reduced moisture migration.

WO 2004/041524 A2



- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

- *without international search report and to be republished upon receipt of that report*